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WALL STREET'S PERSPECTIVES ON TELECOMMUNICATIONS

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BEFORE THE

COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION UNITED STATES SENATE

ONE HUNDRED NINTH CONGRESS

SECOND SESSION

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SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

ONE HUNDRED NINTH CONGRESS

SECOND SESSION

C O N T E N T S

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TUESDAY, MARCH 14, 2006

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U.S. SENATE,
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION,
Washington, DC.

The Committee met, pursuant to notice, at 2:40 p.m. in room SD–106, Dirksen Senate Office Building, Hon. Ted Stevens, Chairman of the Committee, presiding.

OPENING STATEMENT OF HON. JIM DEMINT, U.S. SENATOR FROM SOUTH CAROLINA

Senator DEMINT. [presiding] Gentlemen, the Chairman is on his way and believe me, everything that is said will be taken down and used in our debates here in Committee, but in the interest of your time, and out of respect for you, we would like to get the testimonies started, because we know there is going to be a vote sometime around 3 o'clock.

And instead of me making an opening statement, the Chairman may want to make some comments while he is here. I would just like to begin the testimony here. I do not have all of the introductions here, but we have it as part of the record. And if we could, we will just start with, is it——

Mr. SZYMCZAK. Szymczak.

Senator DEMINT. Szymczak. And the Chairman is here.

We were going to start the witnesses, but if you would like to make a statement before they start, I think that is appropriate.

OPENING STATEMENT OF HON. TED STEVENS, U.S. SENATOR FROM ALASKA

The CHAIRMAN. [presiding] Well, I'll put my prepared statement in the record. I am sorry, I apologize. We do have votes, but I got caught in a meeting I could not get away from. Please, sir, begin.

[The prepared statement of Senator Stevens follows:]

PREPARED STATEMENT OF HON. TED STEVENS, U.S. SENATOR FROM ALASKA

Through our hearings we have heard from the different industry segments and we have heard about many of the different communications issues that this Committee must address.

Today, we here about how what we do legislatively and how we do it may impact investment and jobs in America from our panel of Wall Street experts.

In the four years after passage of the 1996 Telecommunications Act, hundreds of billions of dollars flowed into the communications sector, pushing stock prices up more than 300 percent. But then the bubble burst. Some estimates indicate that the

communications industry lost more than 90 percent of its peak market value in a matter of months, and as a whole lost nearly 500,000 jobs, $2 trillion of market value, and accumulated nearly $1 trillion in debt.

While there were many reasons for the collapse, uncertainty stemming from the 1996 Act certainly played a part. Former FCC Commissioner Furchgott-Roth estimates that nearly two-thirds of the rules passed to implement the 1996 Act have been completely or partially overturned. And some rules remanded to the FCC still have not been revised 10 years after passage of the 1996 Act.

As we listen to our panel today the Committee must consider how we can be sure that any legislation we approve is clear, competitively neutral, and readily implemented. Among the issues the Committee may consider are whether to impose statutes of limitation in challenges to new legislation or rules. Likewise, it may be wise to impose strict time limitations on items remanded to the FCC.

We will also have to listen carefully to ensure that our legislation does not arbitrarily favor one industry segment over another, altering the flow of capital away from market forces and consumer choice.

STATEMENT OF LUKE T. SZYMCZAK, VICE PRESIDENT, JPMORGAN ASSET MANAGEMENT

Mr. SZYMCZAK. Thank you, Chairman Stevens, and other Members of the Committee. My name is Luke Szymczak, and I am a Vice President at JPMorgan Asset Management. I appreciate the opportunity to address the Committee today and share my perspective as an investor in telecom.

These are my views, and not those of JPMorgan.

My role at JPMorgan is both as an analyst, whose responsibility is to have an all-encompassing view of an industry and the stocks in it, and also as an investor, who makes active decisions about which stocks to own in a portfolio, and which not to own.

My specialty is telecom. I am responsible for both the telecom services industry, and the communications equipment industry.

Investors in telecom and technology stocks have had quite a wild ride over the last decade. The excesses of the late 1990s have mostly been wrung from the system. One would hope that the outlook for the industry, from an investor's perspective, would be getting more attractive. Unfortunately, clarity is not yet upon us. Investors are struggling with a number of issues, including determining how the competitive landscape will evolve, attempting to forecast the rate of price and revenue declines, and third, estimating the returns carriers will realize from the large investments being made in broadband access networks.

Any one of these factors raises risks, and the investment analysis is dramatically more complex and uncertain than it was 20 years ago, or even 10 years ago. The questions facing investors are not revolutionary. But we are in uncharted territory for telecom now that freer competition has been unleashed, and it is unclear where this will lead over the next decade.

We have seen some positive developments in recent years. Industry consolidation has begun to rationalize the cost base from a regulated industry model into one of a competitive industry. This has contributed to the strengthening of balance sheets so that companies will have the resources and the financial cushion to contemplate large capital spending plans. Likewise, we have seen continued adoption of broadband access in the consumer market. And the incumbent local exchange companies have made good progress in refining their marketing strategies and techniques, and the

ILECs in general have done a good job of improving their balance sheets, and this should help them weather the storms ahead.

Nonetheless, concern is widespread that the major carriers' positions will worsen despite some of these positive indicators. The list of negatives is long. First, the decline in access lines at the ILECs has a direct and immediate negative impact on their margins and profitability. Second, as the wireless market matures, there is an increase in concern that wireless growth may begin to slow. Third, there is concern that the prevailing price of voice service could be reduced dramatically in the next few years. Fourth, there is a concern that we may soon see new entrants using new technologies with more attractive economics than existing operators can achieve with their current networks. And finally, there is a high degree of skepticism that the substantial investment underway at the ILECs to build broadband networks to the home will deliver a satisfactory return on the incremental investment. The answer to this will come with time.

Fortunately, telecom is a vibrant industry. All the change underway creates new opportunity. Good examples are the progress in wireless and in the Internet over the last 10 years. The forecast for the next 10 years is still uncertain, but I am very confident that it will include even more dramatic and hard to predict change, and this will create significant opportunities for growth.

Ultimately, the degree of carrier success will have a significant impact on the communications equipment industry, as well. With their long history in wireless, it is no accident that the largest provider of wireless infrastructure is based in Sweden, and of wireless handsets is based in Finland.

Likewise, the U.S. has leading companies in the data networking industry as a result of the early adoption in this country of data networking in the 1980s, and the brilliant growth of Internet adoption since the 1990s. This has enabled U.S. data networking companies, both large and small, to take a substantial lead over other competitors.

In my view, the success of U.S. carriers in building great businesses around the networks of the future will be critical in giving the equipment companies that sell to these U.S. carriers opportunities to develop and improve the technology of the future.

After these companies help the U.S. carriers in deployment, they can then sell these technologies to carriers around the globe. If the end result is a success, this should be good for both the stocks of U.S. carriers, as well as the stocks of the equipment companies that supply them.

Thank you.

[The prepared statement of Mr. Szymczak follows:]

PREPARED STATEMENT OF LUKE T. SZYMCZAK, VICE PRESIDENT, JPMORGAN ASSET MANAGEMENT

Chairman Stevens and other Members of the Committee, my name is Luke T. Szymczak and I am a Vice President at JPMorgan Asset Management and I appreciate the opportunity to address the Committee today, and share my perspective as an investor in telecommunications. My role is both as an analyst, whose responsibility is to have an all-encompassing view of an industry and the stocks in it, and also as an investor, who makes active decisions about which stocks to own in a portfolio, and which not to own. My specialty is telecom, and I am responsible for both

the telecom services industry and communications equipment industry. As a result of over a decade of experience with the companies that supply the equipment that is used to construct the telecom networks, and the companies that operate the networks, I bring a very holistic perspective on the telecommunications industry.

Investors in telecom and technology stocks have had quite a wild ride over the last decade. Now that the excesses of the late 1990s have mostly been wrung from the system, one would hope that the outlook for the industry, from an investor's perspective, would be getting more attractive. Unfortunately, such clarity is not yet upon us. Investors are struggling with a number of issues. These include determining how the competitive landscape will evolve, attempting to forecast the rate of price and revenue declines, and making estimates of what returns carriers will realize as a result of the large investments that are currently being made in broadband access networks. Any one of these factors raises risks, but the combination complicates the analysis substantially, and the conclusions are sometimes far from conclusive.

The result is an investment analysis process that is dramatically more complex and uncertain than it was twenty years ago, or even ten years ago. The specific questions that investors face are not revolutionary. But we are in uncharted territory for telecom now that freer competition has been unleashed, and it is unclear just where this will lead over the next decade. Because so many other industries have seen brutal levels of competition following deregulation, investors are reaching conclusions that factor in a great degree of skepticism to reflect the high level of risk and uncertainty.

We certainly have seen some positive developments in recent years. Industry consolidation first in wireless, and subsequently in wireline, has begun the process of rationalizing the cost base from a regulated industry model into one of a competitive industry. This has contributed to the strengthening of balance sheets so that companies will have the resources and the financial cushion to contemplate large capital spending plans. Likewise, we have seen continued adoption of broadband access in the consumer market. And Incumbent Local Exchange Companies (ILECs) have made good progress in refining their marketing strategies and techniques, and also in demonstrating that they can at least moderate, and sometimes offset, the impact of the decline in access lines with the sale of additional services to the customers that remain. And, the ILECs in general have done a good job of improving their balance sheets, which should enable them to weather the storms ahead more sustainably.

There are many concerns. Nonetheless, there remains widespread concern that the major carriers' positions will overall worsen despite some of these positive indicators. Continued decline in access lines at the ILECs has a direct and immediate negative impact on their margins and profitability. Migration of wireline traffic to wireless continues as one of the key factors in the access line decline, but voice offerings from other competitors, both cable system operators and voice over Internet protocol (VoIP), seem to be playing an increased role.

Wireless growth continues to be healthy, but there is an increasing concern that with wireless penetration in the U.S. now in the 70 percent range, wireless growth is likely to begin to slow in coming quarters. Even with consolidation in the industry over the last two years, concerns that we could see intensified wireless price competition as companies press harder to show subscriber growth seem reasonable. And the potential entrance of new competitors as a result of upcoming auctions remains a risk.

There is a very reasonable concern that the prevailing price of voice service could be reduced dramatically in the next few years. Today the average monthly revenue that an ILEC receives for an access line is in the $50 range, with a number of companies above this. Clearly, some VoIP services are currently at half this level, and some pure Internet services have a price near zero. It is hard to forecast the rate at which prices will decline. But the more exposure a company has to traditional voice service, the greater impact this price compression will have on its revenues, margins, and profitability.

There is a good degree of concern that we may soon see new entrants using new technologies with potentially more attractive economics than existing operators can achieve with their current networks. Likewise there is a high degree of skepticism that the substantial investment underway at the ILECs to build broadband networks to the home will deliver a satisfactory return on the incremental investment. It is true that sometimes investors can be too skeptical, and it seems that telecom investors have become extremely risk-adverse. However, in the case of broadband access network investments, the skepticism seems entirely rational given that there has yet to be a proven business model. Memories of the telecom meltdown that started in 2000 and resulted from the big spending programs of the late 1990s,

which proved to be based on entirely misplaced hopes and business models, contribute to the skepticism. The big question is whether carriers' plans are more realistic and achievable this time around. It is a question for which one could make either a positive or negative argument, and the answer will come only with time, and thus the caution.

Obviously my summary list of negative factors in investors' views is far greater than my list of positives, and this helps to explain the relatively unenthusiastic view investors have for telecom services stocks. Clearly, this industry is tougher to analyze now than in the day when investment decisions were made on dividend yield, dividend coverage ratios, and return on assets.

In response, many investors have shifted out of U.S. telecom stocks, into telecom in other regions, particularly emerging markets where growth is the dominant element of the story.

Even so, the U.S. market has some positive attributes relative to alternatives. Most notably it is further along in the deregulatory path than some other mature markets, notably Europe. The regulatory environment here is likely to be more investor-friendly than it may prove to be in Europe. But it will take time for one to be able to prove this conclusion. On some measures, it appears that Europe is at least three years behind the U.S. in wireline deregulation. For example, a decision on whether carriers will have to resell usage of newly-upgraded broadband access facilities to competitors has yet to be taken in Europe, whereas the policy in the U.S. was set in the last Triennial Review. And in contrast to the U.S., where major carriers have made large commitments to upgrading access facilities, in Europe there remains uncertainty as to the attractiveness of upgrading access facilities.

There are opportunities ahead. Fortunately, telecom is a vibrant industry and all the change underway creates new opportunity. Look no further than the progress both wireless and the Internet have made in the last ten years. Although the forecast for the next ten years is uncertain, I am very confident that it will include potentially even more dramatic and hard-to-predict change. This will create significant opportunities for growth. Even so, it will be important for carriers to make wise choices about which opportunities to pursue, and which business models might yield the greatest success.

Ultimately, the carriers' success, or lack of success, will also have a significant impact on the communications equipment industry, which supplies the products to build the telecom infrastructure. It is no accident that the most successful competitor each in wireless infrastructure and wireless handsets is based in Sweden and Finland, respectively. The carriers in these two countries have always been the leaders in pushing the boundaries in the wireless business for over twenty-five years now. And this has created the ecosystem that keeps Ericsson and Nokia on the leading edge. Likewise, it is also clear that the U.S. has the leading companies in the data networking industry. This is a result of the early adoption of local area networking (LAN) in this country in the 1980s, and also the brilliant growth of Internet adoption over the last decade and a half. This has given U.S. companies, both large and small, a substantial lead over other competitors.

In my view, the success of U.S. carriers in building great businesses around the networks of the future will be important in giving the equipment companies that sell to these U.S. carriers the opportunities to develop and refine the technologies of the future. After these companies help the U.S. carriers in deployment, they can then take these technologies and sell them to carriers around the globe. If the end result is a success, this should be good for both the stocks of U.S. carriers, as well as the stocks of the equipment companies that supply them.

The CHAIRMAN. Thank you. Mr. Bourkoff is the Managing Director of Media for Cable Satellite Entertainment Equity and Fixed Income. We appreciate you being here, thank you.

Mr. BOURKOFF. Thank you.

STATEMENT OF ARYEH B. BOURKOFF, MANAGING DIRECTOR/ SENIOR ANALYST, UBS INVESTMENT RESEARCH

Mr. BOURKOFF. Good afternoon. I am honored to be here today to present my perspectives on the cable television and telecommunications landscape in front of this Committee. I will provide a brief overview of the current Pay TV landscape and then discuss investor sentiment and viewpoints of valuation, highlighting key investment considerations.

In the mid-to-late 1990s, the cable industry deployed approximately $90 billion of capital in order to materially upgrade its network capacity to better position the industry to offer advanced digital video services, interactivity, and other applications. The majority of this investment was financed with internal cash-flows and through public market debt financing. The cable industry has historically enjoyed access to the capital markets given the overall stability and predictability of its financial model.

During this period, the Pay TV marketplace became increasingly competitive. Satellite operators aggressively took market share, driving cable's share down from a peak of roughly 95 percent in 1994 to about 63 percent today. In fact, cable's penetration is now as low as 50 percent for many of the cable operators.

As a result of the heightened competition for video services, the cable industry is seeking to differentiate its product by offering a robust suite of services to homes passed by its high-capacity network.

Today, with the network upgraded and advanced offerings in place, the industry is at the very early stages of potentially its most operationally successful period. Nearly 85 percent of the country's homes will have voice available from the cable operators by the end of this year, with consumers receiving a bundle of voice, video, and high speed data products at lower packaged prices with the convenience of a single bill.

Evidence suggests that consumers have embraced the bundled product offering. Penetration of voice services has proliferated at a rate above expectations with operators like Cox, Cablevision, and Time Warner Cable reaching approximately 20 percent penetration of homes in certain markets already. Cablevision recently reported a full 24 percent of its subscribers now take the "Triple Play" bundle a figure we expect to grow to nearly 50 percent by the end of 2007. Other advanced services including high-definition, digital video recorders and video on demand are also growing in popularity.

Despite these promising prospects, the cable companies' share prices remain depressed, with valuations that are at or near historical lows.

In my opinion, there are several key topics affecting investor sentiment toward the sector, and I highlight several of the most prominent here. First is the onset of intensifying video and bundled competition from the telecommunications operators, who are in the process of constructing robust wireline-based fiber networks themselves. Increased competition could result in higher customer acquisition costs and lower pricing in the mature U.S. Pay TV industry. Second is the perpetual concern over another capital expenditure upgrade cycle, particularly as more capacity is devoted to high definition services. Both of these factors depress expectations of future free cash-flow which impact valuation.

Last, and perhaps most prominent, are the risks associated with disintermediation and regulatory uncertainty. Key issues that we consider in this category include the availability of content over various mediums with direct access to consumers; for example, Apple's iPod, Google Video, et cetera, as a la carte cable pricing pro-

posals, the net neutrality debate and the video franchise licensing process.

As a result of these concerns, investors who typically make decisions based on fundamental views of valuation and the prospects of the business model are likely to shy away from cable industry investments, given the increased risk to the predictability of cable model cash-flows.

A heightened level of uncertainty and the diminished predictability will continue to weigh on valuation for the sector. Further, the capital structures for the group could be at risk given an estimated $80 billion of debt that is currently outstanding and held by investors. This is relevant given that the access to capital in the public markets has historically been robust due to the stability of the cable model and the well-understood and defined regulatory environment.

As the Committee reviews issues related to video franchising, I stress the importance of maintaining a level playing field among all operators while allowing consumer preference to dictate changes to current models. Uncertainty among investors will persist if the rules for obtaining a video franchise fluctuate based on the nature of new entrants. In my analysis, I assume that there will be a fully competitive state between cable, satellite, telecommunications, and other providers.

With respect to the buildout requirements for new video franchise applicants, I draw a comparison to the onset of new competition in the U.K. in the early 1990s where operators such as Diamond, Videotron, and Telewest Cable were required to meet certain milestones in order to preserve their licenses. Note that these operators were competing with industry incumbents, like BSkyB and British Telecom.

As media consumption over the Internet develops at a rapid pace, I believe that it is too early to introduce regulation on key issues such as a la carte packaging and pricing and on net neutrality, as the market is still in its early stages. In fact, the broader media and communications sector is perhaps at its most dynamic stage of evolution, as media content is available across multiple platforms under various pricing structures. Changes are occurring at such a frenetic pace that any possible regulation today carries a risk of stunting this innovation if it does not build in enough flexibility for the complexion of the sector in the coming years, if not months. Thank you.

[The prepared statement of Mr. Bourkoff follows:]

PREPARED STATEMENT OF ARYEH B. BOURKOFF, MANAGING DIRECTOR/SENIOR ANALYST, UBS INVESTMENT RESEARCH

Introduction

Good Afternoon. My name is Aryeh Bourkoff and I am Managing Director and Senior Analyst at UBS covering the equity and fixed income debt securities of the cable TV, satellite and entertainment sectors within Media and Telecommunications. I am honored to be here today to present my perspectives on the cable television and telecommunications landscape in front of this Committee.

I will provide a brief overview of the current Pay TV landscape and then discuss investor sentiment and viewpoints of valuation, highlighting key investment considerations.

Industry Background

In the mid-to-late 1990s, the cable industry deployed approximately $90 billion of capital in order to materially upgrade its network capacity to better position the industry to offer advanced digital video services, interactivity, and other applications. The majority of this investment was financed with internal cash flows and through public market debt financings. The cable industry has historically enjoyed access to the capital markets given the overall stability and predictability of its financial model.

During this period, the Pay TV marketplace became increasingly competitive. Satellite operators aggressively took market share, driving cable's share down from a peak of roughly 95 percent in 1994 to about 63 percent today. In fact cable's basic penetration—which we measure as basic subscribers as a percent of homes passed—is now as low as 50 percent for many of the cable operators.

As a result of the heightened competition for video services, the cable industry is seeking to differentiate its product by offering a robust suite of services to homes passed by its high-capacity network.

Current Environment and Valuation

Today, with the network upgraded and a full suite of service offerings in place, the industry is at the early stages of potentially its most operationally successful period. Nearly 85 percent of the country's homes will have voice available from the cable operators by the end of this year, with consumers receiving a bundle of voice, video and high speed data products at lower packaged prices with the convenience of a single bill.

Evidence suggests that consumers have embraced the bundled product offering. Penetration of voice services has proliferated at a rate above expectations—with operators like Cox Communications, Cablevision Systems, and Time Warner Cable reaching approximately 20 percent penetration of homes in certain markets already. In fact, Cablevision recently reported a full 24 percent of its subscribers now take the triple play bundle—a figure we expect to grow to nearly 50 percent by the end of 2007. Other advanced services including high-definition, digital video recorders and video on demand are also growing in popularity.

The cable financial model has evolved from a focus on annual price hikes to drive ARPU (average revenue per subscriber) which sacrificed customer penetration—to one focused on bundled pricing designed to attract customers and boost take rates and unit growth. Capital expenditure requirements are shifting toward variable subscriber acquisition costs rather than fixed network-related costs—with 70 percent of capital budgets now devoted to set top boxes and other consumer devices rather than backhaul and headend infrastructure investments.

Despite these promising prospects, cable-company share prices remain depressed, with valuations that are at or near historical lows.

Topics Impacting Investor Sentiment

In my opinion, there are several key topics affecting investor sentiment towards the sector, and I highlight several of the most prominent here. First is the onset of intensifying video and bundled competition from the telecommunications operators, who are in the process of constructing robust wireline-based fiber networks themselves. Increased competition could result in higher customer acquisition costs and lower pricing in the mature U.S. Pay TV market. Second is the perpetual concern over another capital expenditure upgrade cycle, particularly as higher capacity high definition services begin to fill up the cable network dial. Both of these concerns would depress expectations of future free cash flow which impact valuation.

Lastly, and perhaps most prominent, are the risks associated with disintermediation and regulatory uncertainty. Key issues that we consider in this category include the availability of content over various mediums with direct access to consumers (e.g. Apple's iPod, Google Video, etc.), a la carte cable pricing proposals, the net neutrality debate and the video franchise licensing process. As a result of these concerns, investors who typically make decisions based on fundamental views of valuation and the prospects of the business model are likely to shy away from cable industry investments given the increased risk to the predictability of cable model cash flows.

A heightened level of uncertainty and the diminished predictability will continue to weigh on valuation for the sector. Further, the financial and capital structures for the group could be at risk given an estimated $80+ billion of debt that is currently outstanding and held by investors. This is relevant given that the access to capital in the public debt markets has historically been robust due to the stability of the cable model and the well-understood and defined regulatory environment.

Conclusions and Viewpoint

As the Committee reviews issues related to video franchising, I stress the importance of maintaining a level playing field among all operators while allowing consumer preferences to dictate changes to current models. Uncertainty among investors will persist if the rules surrounding obtaining a video franchise fluctuate based on the nature of the new entrants. In my analysis of the sector, I assume that there will be a fully competitive state between cable, satellite, telecommunications, and other providers with all operators given an equitable opportunity to service the customer base. With respect to the buildout requirements for new applicants of video franchises, I draw a comparison to the onset of new cable/telecommunications competition in the United Kingdom during the early 1990s where operators such as Diamond Cable, Videotron, and Telewest were required to meet certain milestones in order to preserve their licenses. Note that these cable providers were new entrants in that market competing with industry incumbents, including British Sky Broadcasting and British Telecom. Failure to build out a defined percentage of homes within the service territory resulted in fines and progress was closely monitored by regulatory bodies.

The consumption of video and other media services over the Internet is developing at a very rapid pace. I believe that it is too early to introduce regulation on key issues such as a la carte packaging and pricing and on net neutrality as the market is still in its early stages. Instead, I feel that at this point it is essential that market forces and consumer demand drive the economic model. Moving to an a la carte pricing structure would have an impact on the predictability of the distribution model as well as impose risks to content providers over the longer term.

The broader media and communications sector is perhaps at its most dynamic stage of its evolution as media content is available across multiple platforms under various pricing structures. This introduces investment opportunities as well as risk factors as the market place and business models are altered to meet demands of consumers. We believe that the most important place for regulation in the context of this environment is to ensure a level playing field for new entrants as well as incumbents, recognizing that we are already in a competitive situation, as well as in the close monitoring of potential conflicts that may arise. Further, we believe that there are profound risks of unintended consequences in the event that key fundamental aspects of today's landscape are regulated at such an early stage of development, innovation, and creativity. Changes are occurring at such a frenetic pace that any possible regulation today carries a risk of stunting this innovation if it does not build in enough flexibility for how the sector will look in the coming months and years.

The CHAIRMAN. Thank you. Mr. Moore, Wireline Telecom Analyst, Managing Director, Wachovia Securities, thank you for being with us.

STATEMENT OF KEVIN M. MOORE, CFA, MANAGING DIRECTOR, TELECOMMUNICATIONS SERVICES EQUITY RESEARCH, WACHOVIA SECURITIES

Mr. MOORE. Thank you. Chairman Stevens, Members of the Committee, thank you for another opportunity to discuss Wall Street perspective on telecommunications with members of the Senate. My role on Wall Street is to advise institutional investors on the investment prospects of the overall telecommunications industry and of specific companies including RBOCs, rural local exchange carriers and competitive service providers.

My general outlook for the industry is that both telecommunications and media applications are going to become increasingly more mobile and portable and more separated from underlying physical networks over the next 5 years. However, in my prepared comments today, I would like to focus on Wall Street's views on telecommunications regulation.

I will start with some specific regulatory concerns we have heard from investors over the last year, speak about what we think Wall

Street wants in general from regulation, and finish with two areas where I think regulation can promote investment.

First, on some recent investor concerns. The rural local exchange investors are concerned about the change in regulatory support for the universal service funding. Competitive service provider investors are most concerned these companies will have continued access to unbundled network elements, at reasonable prices.

Finally, while RBOC investors remain divided on benefits of RBOC investments in video, the investors in the related equipment companies are concerned that uncertainties around the franchising process could potentially dissuade the RBOCs from aggressively entering the video market.

On Wall Street's general perspective on regulation, first of all it is important to note that Wall Street's role is not to have a prescriptive view on regulatory policy, but only to determine which companies have the best outlook for investment. Relative to telecommunications, we believe that Wall Street's biggest desire is to minimize the need to constantly re-evaluate the role of regulation in its investment decisions. We have enough to worry about in considering the rapidly changing competitive and technological environment. In other words we want regulatory stability and certainty.

I believe that regulation that has three characteristics would aid in the perception of regulatory stability. First is minimal regulation. This statement should not be interpreted as a request to eliminate regulation, but for it to take a minimalist form. In the past 10 years, I believe we have seen a direct correlation between regulatory instability and regulatory complexity.

Second is flexibility. We would all agree that the 1996 Telecom Act did not contemplate many of the subsequent technological developments. However, I think that it's more important that we agree now that we cannot imagine what will happen over the next 10 years. It is then critical that any new regulatory framework takes this uncertainty into account and is sufficiently flexible.

Third is technological consistency. I believe this means that regulation must not be overly application-specific; in other words, it cannot overly differentiates between voice, data and video. A 2006 telecom act that is built on application-specific regulation, that doesn't take into account the movement of voice, data, and even video, into the Internet and into wireless technology could become unstable within a few years of enactment.

And finally, I want to talk about a couple of areas of regulation where we think it can promote investment. The first is interconnection. And the second is last mile access.

Relatively low cost and non-discriminatory interconnection, known as "peering" in the Internet world, have contributed to the success of the two most investable areas in telecommunications, wireless and the Internet, over the last 10 years.

The second key area is non-discriminatory last mile access. This not only includes unbundled network elements but also includes the ability for carriers to carry digital signals over their own last mile without regard to whether those signals contain voice, data, or video.

Thank you, Mr. Chairman. I look forward to answering any of your questions.

[The prepared statement of Mr. Moore follows:]

PREPARED STATEMENT OF KEVIN M. MOORE, CFA, MANAGING DIRECTOR, TELECOMMUNICATIONS SERVICES EQUITY RESEARCH, WACHOVIA SECURITIES

Good afternoon. Chairman Stevens, Co-Chairman Inouye and Members of the Committee, thank you for another opportunity to discuss Wall Street's perspective on telecommunications with members of the Senate. In 1999, I testified to the Senate Judiciary Committee hearing on "Broadband: Competition and Consumer Choice in High-Speed Internet Service and Technologies" a subject that seven years later continues to be very important. As it was then, my role on Wall Street is to advise institutional investors on the investment prospects of the overall telecommunications industry and of specific companies including RBOCs, Rural local exchange carriers (RLECs) and competitive service providers (CSPs/CLECs).

My investment research and conclusions are published and I can make copies of it available to Committee Members. My general view on the industry is that both telecommunications and media applications are going to become increasingly more mobile/portable and more separated from underlying physical networks over the next five years. However, in my prepared comments today, I would like to focus on Wall Street's views on telecommunications regulation. These views represent my own observations and not those of any specific investor.

I will start with some specific regulatory concerns we've heard over the last year, then move on to what we believe Wall Street wants in general from regulation, and finish with two areas that we think regulation can promote investment.

Some Recent Investor Concerns

Three specific concerns seem to have weighed on investors minds over the last year. First, RLEC investors are concerned about the continued commitment of regulators to universal service funding (USF). Second, competitive service provider investors are most concerned that these companies will have continued access to unbundled network elements (UNEs) at reasonable prices. Finally, while RBOC investors remain divided on the benefits of RBOC investments in video, the investors in the related equipment companies are concerned that uncertainties around the franchising process could potentially dissuade the RBOCs from aggressively entering the video market.

Wall Street's General Perspective on Regulation

It is important to note that Wall Street's role is not to have a prescriptive view on regulatory policy but only to determine which companies have the best outlook for investment. In this context, telecommunications companies have to compete with thousands of other public companies for debt and equity investment. In the competition for capital, the relative regulatory environment is important in determining which industries and companies will get capital.

Relative to telecommunications, we believe that Wall Street's biggest desire is to minimize the need to constantly re-evaluate the role of regulation in its telecommunication investment decisions. We have enough to worry about in considering the rapidly changing competitive and the technological environment. In other words we want regulatory stability and certainty. I believe that regulation that has three characteristics would aid in the perception of regulatory stability.

First is minimal regulation. I want to make sure that this statement is not interpreted as a request to eliminate regulation but for it to take a minimalist form. In the past 10 years, I believe we have seen a direct correlation between regulatory instability and complexity in regulation. This has been evident in the many legal battles including the most recent battle over the FCC's Triennial Review Order. We believe that all of these battles have hurt investment in the sector.

Second is flexibility. We would all agree that the 1996 Telecommunications Act did not contemplate the impact of the growth of broadband and Internet applications. However, I think that it more important that we agree now that we can't imagine what will happen technologically over the next ten years. It is then critical that any new regulatory framework takes this uncertainty into account and is sufficiently flexible. This flexibility would ensure that future investment can keep pace with industry changes undeterred by constant regulatory uncertainty.

Third is technological consistency. I believe this means that regulation must not be application specific (i.e., it overly differentiates between voice, video or data). A 2006 telecom act that is built on application specific regulation which doesn't take

into account the increasing separation between physical networks and applications and the accelerating movement of those applications to the Internet and wireless technology could become unstable within a few years. This destabilization would again negatively impact investment in the sector.

Application specific regulation could hurt investment in existing services like third-party VoIP (i.e., not provided by a facilities-based carrier) but more importantly in the rapidly emerging area of third party provision of video directly over the *public* Internet.

Specific Regulatory Issues That Can Impact Future Investment

Finally I want to focus on two specific areas of regulation that I believe are critical to capital being available to support innovation and competition in the future. These areas are interconnection and last mile access.

Relatively low cost and non-discriminatory interconnection (known as peering in the Internet world) have contributed to the success of the two most investable areas in telecommunications, wireless and the Internet. We believe that interconnection will continue to be important in the future.

The second key area is non-discriminatory last mile access. This not only includes UNEs but also includes the non-discriminatory ability for carriers to carry digital signals over their own last mile without regard whether those signals contain voice data or video.

Thank you Mr. Chairman. I look forward to answering the Committee's questions.

The CHAIRMAN. Thank you, Mr. Moore.

And now, Mr. Moffett, Vice President and Senior Analyst of U.S. cable and satellite broadcast media, thank you for being with us.

Mr. MOFFETT. Thank you.

STATEMENT OF CRAIG E. MOFFETT, VICE PRESIDENT/SENIOR ANALYST, SANFORD C. BERNSTEIN AND CO., LLC

Mr. MOFFETT. Chairman Stevens, and Members of the Committee, I want to express my thanks for your inviting me here to participate this afternoon. I cover the cable and satellite sector. And while I have written a great deal about issues such as a la carte retransmission consent, franchising rules, and broadcast indecency, I am going to confine my statements today to issues related to physical networks, and the constellation of issues that have been given the name, "net neutrality." I believe that there is a risk that we are embarking on a course that will discourage network investment.

The net neutrality debate has become a catchall for a number of competing public policy needs. We want to ensure the availability of ubiquitous and reliable high-speed Internet access, and we want to do it while minimizing consumer prices and maximizing consumer choice. That means we need to foster investment in the networks themselves, and we need to do that while at the same time protecting inalienable First Amendment principles, and creating a vibrant climate for innovation in network-reliant businesses.

Now, with respect to the first part of that balancing act; that is, fostering investment in the networks themselves, Wall Street has by and large already cast its vote, and the capital markets see a bleak future for network operators. Cable stocks have suffered 5 years of valuation declines relative to the broader market. Telecommunications firms like Verizon and AT&T have been given similar treatment. Comcast stock is punished every time the company even mentions the words "capital investment." And Verizon's stock, likewise, was punished throughout 2005, due to the capital market's distaste for expansive capital investments in their fiber-optic deployment.

Now ironically, that comes at a time when consumer broadband demand is exploding. But despite that strong demand for networks, Wall Street harbors grave doubts about the ability to earn a return on network investments. Excessive competition and an uncertain regulatory environment are dampening capital formation, and slowing the pace of investment.

That investment is critical, though, because despite a great deal of arm waving from visionaries, our telecommunications infrastructure today is woefully unprepared for the widespread delivery of advanced services, especially video, over the Internet.

Downloading a single half-hour television show on the web consumes more bandwidth than does receiving 200 e-mails a day for a year. Downloading a single high-definition movie consumes more bandwidth than does downloading 35,000 web pages, and it is the equivalent of downloading 2,300 songs off of Apple's iTunes website.

Today's networks simply are not scaled for that kind of usage. In a recent series of reports that I entitled, "The Dumb Pipe Paradox," that I believe provided the original impetus for the Committee's invitation to testify today, I tried to address the misconception that telcos are rapidly rushing in to meet this need and provide competition for cable incumbents.

In fact, by their own best estimate, the telcos will be able to reach no more than 40 percent or so of American households with fiber over the next 7 to 10 years. And most of that will be in the form of hybrid fiber-legacy copper networks such as that being constructed by AT&T under the banner of "Project Lightspeed." Those hybrid networks are expected to deliver 20 megabits per second average downstream bandwidth. And after accounting for significant standard deviations around that average, that will mean that many enabled subscribers will receive far less than that. I and many others on Wall Street harbor real doubts about whether those hybrid networks are going to prove technologically sufficient to meet future demands.

More importantly, for 60 percent of the country, there are simply no new networks on the horizon. And the existing infrastructure from the telcos, DSL running at speeds of just one and a half to three megabits per second or so, simply will not be adequate to be considered broadband connections in 5 years or so. That includes, by the way, wireless networks. Current and planned wireless networks, including the overhyped WiMAX technology, offer the promise of satisfying today's definition of broadband, but they cannot simply feasibly support the kind of bandwidth required for dedicated point-to-point video.

Again, Wall Street's view is that even these investments are unwarranted. Verizon's network investment strategy is predicated largely on cost savings, not on potential returns from providing new services. We expect Verizon's return on investment to be marginally positive. AT&T's is less costly, but generates even fewer cost savings, so it is significantly worse. Without cost savings, the cost of these networks is far beyond what the returns of the new services can provide.

The notion of "Net Neutrality" as it is currently construed would, I believe, just dampen enthusiasm for investments even further,

and would trigger a host of unintended consequences. Mandated net neutrality would further sour Wall Street's taste for broadband infrastructure investments, make it increasingly difficult to sustain necessary capital returns, and would likely mean that consumers alone would be required to foot the entire bill for whatever network investments do get made.

Conversely, from a Wall Street perspective, allowing a multiplicity of payers; that is, advertisers and web service providers, to support network investments, would greatly bolster the business case, and would offer the prospect of better returns, and more consumer choice in the end.

Thank you for your attention.

[The prepared statement of Mr. Moffett follows:]

PREPARED STATEMENT OF CRAIG E. MOFFETT, VICE PRESIDENT/SENIOR ANALYST, SANFORD C. BERNSTEIN AND CO., LLC

Chairman Stevens, Co-Chairman Inouye, and distinguished Members of the Committee, I want to express my thanks for the opportunity to participate in today's hearings.

I've spent the past three years as an Equity Research Analyst at Sanford C. Bernstein covering the U.S. Cable and Satellite sector, and I believe I'm here to reflect the views of Wall Street. But you should also note that I previously spent more than a decade consulting to telecommunications companies as a partner and Global Leader of The Boston Consulting Group's telecommunications practice (where I lived through the drafting and the aftermath of the 1996 Act) and I've also been the President of a 400-person Internet auction business, so my views today are likely to reflect those perspectives at least as much as the Wall Street view.

While I've written a great deal about issues such as à la carte, retransmission consent, franchising rules, and broadcast indecency, I'll confine my prepared comments today to issues related to *physical* networks, and the constellation of issues that have been given the unfortunate name of "Net Neutrality." I believe there is a risk that we are embarking on a course that will discourage network investment, to the long-term detriment of the economy and our society.

The "Net Neutrality" debate has become a catch-all for a number of competing public policy needs. We want to ensure the availability of ubiquitous and reliable high speed Internet access, and we want to do it while minimizing consumer prices and maximizing consumer choice.

That means we need to foster investment in the networks themselves. And we need to do that while at the same time protecting inalienable First Amendment principles, and creating a vibrant climate for innovation in network-reliant businesses.

With respect to the first part of that balancing act, *i.e.,* "fostering investment in the networks themselves," Wall Street has, by and large, already cast its vote. The capital markets see a bleak future for network operators. Cable stocks have suffered five years of valuation declines relative to the broader market. Telecommunications firms like Verizon and AT&T have been given similar treatment. Comcast's stock is punished every time the Company's management even mentions the words "capital investment." Verizon's stock was likewise punished throughout 2005 due to the capital markets' distaste for the expansive capital investments in their FiOS fiber optic deployment.

Ironically, this comes at a time when consumer broadband demand is exploding. Sony's *PlayStation* and tech companies like Microsoft talk about "owning the living room," and AOL and Yahoo! and Google are all planning video-rich strategies. New applications like video telephony and video surveillance over the web have barely started yet.

Despite this strong demand for networks, however, Wall Street harbors grave doubts about the ability to earn a return on network investments. Excessive competition and an uncertain, and at times hostile, regulatory environment are dampening capital formation and slowing the pace of investment.

And that investment is critical, because despite a great deal of arm waving from "visionaries," our telecommunications infrastructure is woefully unprepared for widespread delivery of advanced services, especially video, over the Internet. Downloading a single half hour TV show on the web consumes more bandwidth

than does receiving 200 e-mails a day for a full year. Downloading a single high definition movie consumes more bandwidth than does the downloading of 35,000 web pages; it's the equivalent of downloading 2,300 songs over Apple's iTunes website. Today's networks simply aren't scaled for that.

In a series of recent research reports that I entitled *"The Dumb Pipe Paradox"* *—which I believe provided the original impetus for the Committee's invitation to testify today—I tried to address the misconception that the telcos are rapidly rushing in to meet this need and to provide competition for cable incumbents. In fact, by their own best estimates, they'll be able to reach no more than 40 percent or so of American households with fiber over the next seven years.

And most of that will be in the form of hybrid fiber/legacy copper networks, such as that being constructed by AT&T under the banner of "Project Lightspeed." These hybrid networks are expected to deliver 20Mbs average downstream bandwidth. After accounting for significant standard deviation around that average, that will mean many "enabled" subscribers will actually receive far less. I and many others on Wall Street harbor real doubts as whether these hybrid networks will prove technologically sufficient to meet future demands.

More importantly, in 60 percent of the country, there are simply *no* new networks on the horizon, and the existing infrastructure from the telcos—DSL running at speeds of just 1.5Mbs or so—simply won't be adequate to be considered "broadband" in five years or so. That includes wireless networks, by the way. Current and planned wireless networks—including the over-hyped Wi-Max technology—offer the promise of satisfying *today's* definition of broadband, but simply can't feasibly support the kind of bandwidth required for the kind of dedicated point-to-point video connections that will be required to be considered broadband tomorrow. Those demands will continue to fall to terrestrial wired networks.

Again, the Wall Street view is that even this amount of investment is unwarranted. Verizon's network investment strategy is predicated largely on cost savings, not on the potential returns from delivering new services. We expect Verizon's return on investment to be marginally positive. AT&T's is less costly, but generates fewer cost savings, and so is likely significantly worse. You simply can't make a case for major new investments on the basis of voice, video, and data as currently conceived.

In Part I of the *"Dumb Pipe Paradox,"* I noted that if a telco was in the business of providing broadband connections only—that is, if phone service becomes, as many predict, simply another bit stream on top of a data connection—then the cost to provide service would be as much as $80 per month. And from a consumer's perspective, that would be the pipe only, before paying for *any* content over the web.

And the cost, and therefore the price, would likely be much, much more. Some recent comments from BellSouth's Chief Architect, Henry Kafka, at the Optical Fiber Communication/National Fiber Optics Engineers Conference last week put this in perspective. He estimated that the average residential broadband user today consumes about two gigabytes of data per month. Heavy users who regularly download movies consume an average of 9 gigabytes of data per month. In the future, watching IPTV would consume 224 gigabytes, and would cost carriers $112 per month to deliver. And if IPTV is going to deliver High Definition, then the average user would be consuming more than one terabyte per month, at a cost to carriers of $560 per month.

That, I believe, puts the "Net Neutrality" debate in context. The very valence of the phrase suggests that the First Amendment is about to be trampled lest it be legislatively protected. And the very idea that third parties who benefit from Internet infrastructure investments—say, Google and Yahoo!—might economically contribute in some way to these costs has been roundly greeted as if it is a threat to basic liberties.

But the notion of "Net Neutrality" as it is currently construed would, I believe, likely trigger a host of unintended consequences. Mandated "Net Neutrality" would further sour Wall Street's taste for broadband infrastructure investments, making it increasingly difficult to sustain the necessary capital investments.

It would also likely mean that consumers alone would be required to foot the bill for whatever future network investments that *do* get made. That would result in much higher end-user prices, much steeper subsidies of heavy users by occasional ones, and, in all likelihood, a much sharper "digital divide." By discouraging the deployment of new networks, it would also likely freeze in place the status quo cable/telco duopoly (or worse in much of the country, where we are, as previously described, on a trajectory to a near cable monopoly for genuine broadband). The U.S.

* The information referred to has been retained in Committee files.

as a whole would, in all likelihood, fall further behind other countries in broadband availability and reliability.

Conversely, from a Wall Street perspective, allowing a “multiplicity of payers” (say, advertisers, or web services providers) to support network investments would greatly bolster the business case for deploying new infrastructure, as it would offer the prospect of more attractive returns. And while current network operators would undeniably benefit in such a regime, so too would consumers, who would likely see both greater choice and lower prices.

And despite their current howls at the idea of paying for such services as packet prioritization (what some have referred to as a “fast lane” for data), it is likely that the Internet services community would be the biggest beneficiaries of all, inasmuch as they would be assured of an infrastructure capable of supporting innovation in new high bandwidth Internet-based services.

The First Amendment concerns surrounding “Net Neutrality” are very real. But surely these concerns they can be dealt with—say, though anti-blocking provisions, or through the carve-out of a neutral “basic tier”—without triggering this laundry list of unintended consequences. Indeed, it is my belief that network operators can feasibly meet the needs of unfettered access to any and all web-based content by providing a “basic access tier” that provides for a fixed minimum amount of bandwidth (or, alternatively, a fixed percentage of total bandwidth) in which pure neutrality would be maintained, and that the provision of resources over and above that minimum can then be left entirely to market forces.

Once again, I thank you for your kind attention.

The CHAIRMAN. Thank you, gentlemen. None of you painted a particularly rosy picture of investment in the telecom industry, yet we see that as one of the most promising industries in our country today. And I think as a Congress, as a committee, what we are trying to connect is this potential with the legislation of the regulatory structure that needs to be in place to encourage that investment.

I had hoped to hear a little more from you about what we need to do to create incentives for investment. Mr. Moore, you suggested I think some consistency in regulation, and I think several of you had other things to suggest. But in the few minutes that we have, if you could all maybe just give us your quick, or highest priority thing that we need to do as a Committee to encourage more investment, more buildout in the industry? Who would like to start us? Mr. Bourkoff?

Mr. BOURKOFF. Thank you. Well, I think the key issue is clarity. I think when you have issues like video franchising, and a la carte, and net neutrality, these really go to the fundamental tenets of the business models we are talking about, creates a lot of uncertainty in the market which restrict potential investments for future services.

I think once we have clarity on things like video franchising, especially, which seems to be more near-term, I think that will establish a level playing field, and will allow the investors to make investments on a debt and equity basis that could see a return over the next few years. I think that would probably encourage investments.

Mr. MOORE. I would also agree with that. Clarity and certainty are probably the two biggest things the government can do to incentivize investment. And I think incentivizing it proactively can be very difficult. The key thing for regulators is to do no harm, and to keep regulation on a minimal basis, so that the market can react with a certainty as to the opportunities.

Mr. MOFFETT. I would second the point about doing no harm. I think some of the more draconian proposals that we have seen, with respect to net neutrality for example; while they protect very

important First Amendment rights, I think they have the unintended consequence of dampening the potential returns of network investments, and effectively requiring the consumer to foot the entire bill for future network buildout. That is a very challenging future, because it suggests that consumer prices will end up being very high. In the face of very high prices, there are natural disposable income limits that will dampen the demand for broadband at those kind of prices, and you will not get the kind of innovation that I think the network neutrality debate is actually trying to foster, simply because it prevents the investment in the underlying infrastructure that is necessary for that ecosystem to thrive.

Senator DEMINT. Mr. Moffett, just a question about net neutrality. I understand the clarity, the certainty of regulations, that if you are going to invest generally for a longer term; we do not want the regulations to change. Are you saying that regardless of net neutrality or not, it just needs to be done, it needs to be permanent? Or are you suggesting a way that it is done that would work better for investment?

Mr. MOFFETT. Well, I am saying that the way that it is done in this case makes a great deal of difference. And if there are hard and fast rules that say, for example, prioritization or what network operators have called creating "fast lanes," for example, is off-limits because it in some ways favors one over another and therefore is deemed to be objectionable to legislators, then that has the unintended consequence of saying that it is therefore not possible to charge third parties for network services; therefore, the consumer has to foot the entire bill. That inevitably will dampen investment in the sector even if the legislation is enacted for enviable goals.

The CHAIRMAN. I don't know if you are familiar with a book that was written by the former FCC commissioner, Commissioner Furchtgott–Roth. He takes the position, as we understand it, that about two-thirds of the rules that were put into place after the 1996 Act, were overturned, and that really created the instability in the industry. Do you all agree with that?

Mr. MOORE. Mr. Chairman, I strongly agree. As I mentioned in my comments, I think, complexity of regulation almost inevitably equates to investment and regulatory instability.

The CHAIRMAN. This was not complexity. This was complete reversal. He points out many of the mandated regulations were never issued, and two-thirds of those that were issued were overturned by courts.

Mr. MOORE. I think that is because there were too many, that many of them had to be overturned.

Mr. MOFFETT. Mr. Chairman, I would concur with that. I believe that there is also an inherent difficulty when technology is moving as fast as it is in this sector to try to anticipate technology changes. And much of what happened in the 1996 Act was trying to anticipate technology changes. That turned out to be an impossible task.

We are in that same position today. We are trying to create—to return to the network neutrality debate, for example, neutrality with respect to things like peering sites, and spam, and antivirus protection, and spyware, that are sort of natural things that a network operator does. Legislatively, that would be an incredibly difficult task, and would be obsolete even before it was written.

The CHAIRMAN. You all seem to be saying, at least I think I am hearing, if we try to protect the consumer, we are going to hurt the investor; is that right? That is your position?

Mr. MOFFETT. Mr. Chairman, I do not mean that that is the case. I mean that we have to be careful as we try to protect the consumer, first to recognize that in many cases protecting the investors and protecting the consumers are the same thing, because a great deal of consumer welfare, here, comes about because of creating additional choice, and that means fostering investment.

But as was said by Mr. Moore, it is important to recognize that a light touch from a regulatory perspective is probably the best outcome, and does not assume no regulation. It simply assumes that the most unobtrusive path to consumer welfare is probably the best one.

The CHAIRMAN. Go ahead, Mr. Bourkoff.

Mr. BOURKOFF. Thank you, Mr. Chairman. I would also say that I think the consumer is benefiting tremendously right now. The landscape is shifting so quickly that the media content is being really demanded by consumers rather than being pushed to them, right now. And that is evidenced by the fact that there are different devices now like the iPod, and like Google Video, where consumers can now go and watch different shows where they want; video on demand, and so on.

And I think the industry is catering to that consumer. I think the danger is to put a line in the sand as the consumer behavior is shifting, and to sort of set it at a moment in time, because it really may look a lot different in the next few months.

The CHAIRMAN. All right. Any of you concerned about our white spaces concept, of making available the white spaces to unlicensed activities? Are you familiar with what we are doing?

Mr. MOORE. Yes, Senator. I think that any kind of provision of additional capacity or bandwidth, particularly on an unlicensed basis, which by default means its lack of regulatory depth, is going to be good for development. I think WiFi is a huge example of how things can really explode when there is a very light regulatory touch.

And you know, addressing your previous comment, I would say look at the Internet and wireless; two of the most lightly regulated areas. I think consumers have incredibly benefited by that light regulatory touch, you know, beyond those people's expectations.

The CHAIRMAN. Mr. Szymczak, you noted in your statement, I believe, that the price for voice services is likely to fall in the future. What services or revenue streams do you think would make up that loss? How do you predict that?

Mr. SZYMCZAK. Well, the driver on this decline, of course, is greater competition, and the voice traffic moving onto Internet-type of backbones, away from the traditional circuit-switched network. And I think the opportunities for carriers are to push more aggressively into broadband. We are seeing broadband, obviously, into homes, and we are also seeing broadband wireless, now, starting to roll out, at different carriers here in the U.S. And so these are incremental revenue opportunities for them. The hope is that the growth in the high-speed can offset the decline in the voice revenues. I think there is much risk in the calculation, and I think that

is why you see these aggressive efforts to find other revenue opportunities to help justify the investments they want to make in the network, which has led into the network neutrality debate, as well as other things. So clearly, we have great telecom networks in the U.S. And to maintain them, you need a revenue stream to continue the investment to maintain those networks into the future.

The CHAIRMAN. My last question for this group: the universal service payments have been made primarily by the long-distance carriers, by the customers of long-distance carriers. We are looking to broaden the concept of universal service contributions so that all communications pays in a very minimal amount. What effect will that have on the markets? We envision that everyone that has a number, or some similar address, would be paying a very small amount into this fund, and the fund will still be maintained by the industry itself. What is that impact on the investment market?

Mr. MOORE. Senator, I cover the rural local exchange industry. And as I mentioned, one of the biggest concerns of investors in that sector is continued support for USF. I think broadening the base and ensuring the stability of the Fund is going to have a tremendous benefit to both the investors, companies, and the consumers, in the rural space.

The CHAIRMAN. Anyone disagree?

Mr. BOURKOFF. Aryeh Bourkoff. Mr. Chairman, I think there is a risk that the discrepancy of profitability will expand if that were to happen. The RLECs enjoy margins materially higher than the ILECs and the cable companies, right now, I think as a result of the Fund. And if that were to redistribute, so to speak, and I think the Bells and the cable companies may have even more of a profitability disadvantage.

The CHAIRMAN. Disadvantage?

Mr. BOURKOFF. Yes, because obviously, the cable companies today do not pay into the Universal Service Fund. And if they were to participate, it would drag their margins down even further, where the RLECs right now enjoy margins above 50 percent. The cable and the ILECs are around 40 percent, right now.

The CHAIRMAN. Let me ask you about this net neutrality problem that two of you have mentioned substantially. Do you think a network operator could block access to a company like Google or Yahoo! and really get away with it?

Mr. SZYMCZAK. I think that would be very difficult to sustain on an ongoing basis. Because if we think about it from a competitive perspective, if the phone company were to block access to a website, a lot of its customers would switch within that day or the next day to a cable operator. So it would always offer an opportunity to the fellow who is not blocking it to take customers. So I think that pressure will make it very difficult for an access provider to block access to an important service.

The CHAIRMAN. Go ahead, Mr. Bourkoff.

Mr. BOURKOFF. Thank you, Mr. Chairman. I agree. I think that blocking an access would be a devastating outcome. But I think the middle ground is probably that there has to be a tiering structure put into place, where some of the higher-capacity content over the Internet that really requires a lot more bandwidth, you may have to pay more for packet prioritization, for some of that content.

Otherwise, there is a risk that the CapEx cycle will continue to increase, and that there may be a sort of inequitable distribution of that capacity. So there should be equal access, in my view, of video content across the spectrum, but maybe at a defined capacity level. If it gets above or below that, there may be a tiering structure, which could help differentiate that.

The CHAIRMAN. We were visited by some minority groups recently about the lack of access for minority groups, in terms of access to channels, and just general access to being able to provide content. If we get into that, is that going to have much effect on your testimony here today? If we mandate some percentage participation in markets, what is the impact on the stock market? You do not want to touch that?

Mr. MOFFETT. I am sorry, you are referring to inducements for minority investment in some of these areas like in the past, wireless——

The CHAIRMAN. I am talking about having Congress mandate that each area must allow a participation of a dominant, or one or two of the dominant minorities in the area, have access to channels, and to provision of content.

Mr. BOURKOFF. I am a proponent of the fact that there is equal access that should be enabled. And if it is not happening, it could be mandated. But the rate card, or the prices paid for that content could vary, depending on the market factors like demand, and obviously, viewership, and so on.

The CHAIRMAN. Well, we thank you. I am sorry the other members were not here today. This is what we call a "vote-a-rama," starting out there right now, at least seven votes in a row on the budget bill, and we did not anticipate that when we scheduled the hearing.

Thank you all for taking the time and going to the trouble of preparing the statements and appearing here. We would appreciate your comments as you see us keep going on this markup, which we will take up, I think will start sometime after Easter, and really get down to trying to get a bill out on it. So if you have any further comments you would like to get to us, we will appreciate receiving them.

Thank you very much for coming.

[Whereupon, at 3:20 p.m., the hearing was adjourned.]

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